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United States Department of Agriculture
Rural Electrification Administration
Telephone Engineering Division

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TELEPHONE ENGINEERING NEWSLETTER ISSUE NO. 1

Newsletters can provide a satisfactory means for answering technical questions that arise in the field. They are not intended to be instructions nor to replace in any respect the presently approved channels for establishing requirements and procedures. It is expected that the subjects covered in Newsletters will be in answer to questions or discussion items submitted by field engineers. It is planned to issue a Newsletter each month containing items of general interest to REA engineers in the design, construction and technical operation of REA-financed telephone systems. Suggestions for subjects to be covered will be gladly received.

Precipitation Static

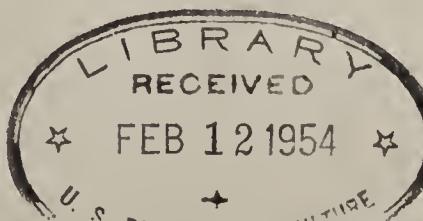
Reports have been received from borrowers that static electrical charges from dust storms accumulate voltages high enough to discharge to ground across protector air gaps. The discharges result in disagreeable sounds audible to persons who may be using the telephone lines at the time. It is possible for similar static discharges to occur due to snow storms. The method of prevention of voltage build-up is by drainage devices which can be applied to the lines affected. The particular devices used will depend on the type of circuit affected. If assistance on problems of this type is desired, full information should be furnished REA.

Clearance between Crossarm Brace and a Wire on a Drop Bracket in Pin Position 5 or 6 on a Type 6A Crossarm.

Where a wire is on a drop bracket in pin position 5 or 6, there is insufficient clearance between the wire and crossarm brace. To increase the clearance sufficiently, 30-inch crossarm braces can be used instead of 20-inch. It is not necessary to relocate the brace-bolt holes for 30-inch braces on Type 6A crossarms.

Bridle Wire Breakage at Line Wire Connections.

The use of #14 copper wire for bridling to open wire lines is a means of overcoming breakage at connection to line wire, experienced in some areas with bridle wire of smaller gage. The recommended wire is listed



as outside distributing wire in the "Suggested List of Materials Suitable for Use on REA Borrowers' Telephone Systems." All tap splices to line wire should be made using the compression type splicing sleeves.

Error on P Na-2 of "Suggested List of Materials Suitable for Use on REA Borrowers' Telephone Systems."

Alpeth and Stalpeth plastic sheathed cables manufactured by the Western Electric Company appear on the above referenced page of the "Suggested List" under the heading "Plastic insulated exchange cable." This listing is in error as these cables are insulated with either pulp or paper. This error will be corrected in a future issue of this page. The same error appears on P Na-2 of Supplement No. 2, September 1953 to the "Suggested List of Materials Suitable for Use on REA Borrowers' Telephone Systems." It is suggested that notation be made on the referenced pages to indicate that these cables are pulp or paper insulated.

Staples Used with Station Ground Wires.

It has been brought to our attention that drawings P1-1, P2-1 and P2-1A in the REA "Telephone System Construction Contract" specify staples for use on station protector ground wires as item "al." The staples, which are indexed in the "Suggested List of Materials Suitable for Use on REA Borrowers' Telephone Systems," as item "al" are too large for this use. Small staples of a non-corrosive type which will not damage the premises can generally be obtained locally.